CHICAGO USERS GROUP

PRESENTS

CHICAGO TIMES

NEWSLETTER OF THE CHICAGO TI-99/4A USERS GROU

"BLESSED ARE THE PESSIMISTS
FOR THEY HATH MADE BACKUPS!"

JAN. 31, 1986
EDITOR: Carole Goldstein

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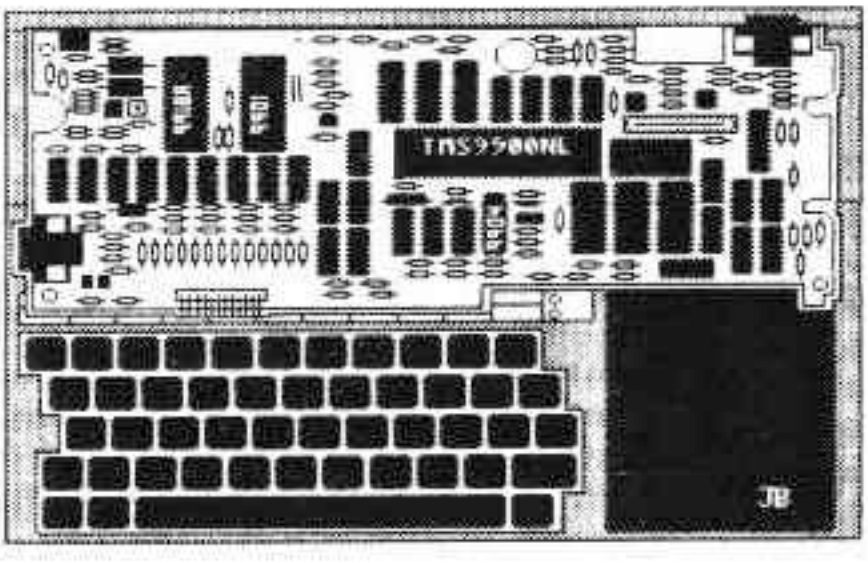

THE FEB MEETING

will be held on Saturday Feb. 1, 1986 from 1:00 to 3:00 in the Fireside Lounge at Triton College. The meeting will feature a demonstration of HAM radio, RTTY and the TI99/4A.

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BULLETINS:

The PASCAL SIG will meet at 11:00 the day of the meeting.

The BUSINESS SIG will meet after the regular meeting.

MEETING DATES FOR THIS COMING YEAR ARE AS FOLLOWS:

JANUARY 4	JUNE 7
FEBRUARY 1	SEPT 6
MARCH 1	OCT 4
APRIL 5	NOV 1 (TI FAIRE)
MAY 7	DEC 6

THE DISASSEMBLY: Dave Wakely

What? The new year already? Please, I'm still recovering from the Faire. As to last month's absence of this column from this newsletter, feel free to choose any of the following excuses: 1) The deadline snuck up and mugged me from behind. 2) I was struck down in my prime by a rare disease, and no one knows what it is (it is possible I caught it by standing too close to the new Myarc computer at the Faire). 3) My dog ate my column.

Considering that my last two columns were about what was going to happen at the Faire, and what did happen at the Faire, I guess it is time to review what is going on with the group, especially for those of you who don't/won't/can't come to the meetings. Of course, this will be of little interest to our national readers. And this, in fact, is no joke. Large portions of the ChiTImes have apparently been "syndicated" via inclusion in the newsletters of those groups with whom we trade. We have no problems with this, it has been a practice with TI groups for years, but I have found it a little startling to see The Disassembly reprinted in the Northern Idaho TI users group newsletter, for example. Not that I mind it, of course, but it has inspired me to introduce the concept of "Freecolumn" distribution. If you like this column and if you use it, please send $10. (suggested) to the address on the back of this newsletter, attn: D. Wakely. Or, send what you feel this column is worth, but remember that there are some items that the Post Office just will NOT deliver. My real goal, of course, is not financial gain, but merely to be considered the Mike Royko of TI columnists, except that I promise not to pick on California TI user groups, for sure.

The group thanks John Behnke and Jack Topham for their graphics/drawing program presentations at the January meeting. One of the many things which has changed over the past two years is that we must rely much more on ourselves for meeting content. A few years ago there was no lack of outside people, with all types of TI compatible hardware and software, to line up as presenters at our meetings, but more and more, we have had to do it ourselves as the 3rd party market has shrunk. For example, our own Jan Janowski will present at the Feb. meeting on Amateur Radio and the TI, which also sounds like an interesting idea for a SIG.

I had to look hard for it, but there in Texincia's column was a brief mention of the results of the group officer elections held in December. If you missed it you may not know that Butch and Carole Goldstein are now the group's "co-Presidents", and I join in the congratulations to them. The group should be applauded, we have made a good choice. Sandy Bartels has agreed to stay on as group Secretary, and the rest of the executive board was re-elected by acclamation. Somehow or other ex-Presidents Sam Pincus and Dave Wakely were corraled into serving as events chairmen for this year.

It also occurs to me that some of our newer members may have been somewhat startled by the sudden appearance (actually a reappearance) of the column by one Texincia Lubbock. Texie made her debut in the pages of the ChiTImes a few years ago, as I recall, and then abruptly vanished. Rumor had it that she was serving time at a prominent women's federal correctional facility. Whatever the reason, she disappeared, and the past two newsletter editors have steadfastly

refused to reveal her identity. Something about the TI must attract women who wish to remain anonymous, as those readers of that formerly all-TI magazine which I refuse to mention by name may remember. Regena, however, is a nun compared to the antics of Texincia. In her last column I counted at least 3 behaviors more appropriate for a police blotter than a TI group newsletter (speeding, drinking while driving, use of a controlled substance). Texincia's columns have always also contained not so subtle hints of illegal use of the hands, as well. Rumor has it that at the Super Bowl, Bears QB Jim McMahon will be wearing a headband which reads "TEXINCIA", a testimony to her own unique method of "sacking the quarterback". We'll see. Meanwhile, don't get me wrong. T.L. is always down to earth (indeed, some say usually in a supine position), and tells it like it is. Give 'em heck, honey, whoever you are, and do let us know when you need help making bail!

Somewhat earlier in this column I mentioned our contact with other TI user groups. The last time I checked I was told by the ineffable Grant Schmalgemeier that we have a list of well over 300 organized TI user groups. If you will be doing some travelling this year and spending some time in other parts of the country (or the world), check with Grant. He will probably be able to give you the address of a nearby TI group which you may be able to make arrangements to contact during your visit/vacation. Just be sure to report all such occurances to this newsletter. Actually, I have been too hard on Grant in this column, there are times when he is utterly effable!

Also somewhat earlier in this column I had some fun with the "Freecolumn" concept. The recent articles both here and in MICROpendium on the reactions of authors to the rewards of "freeware" is no laughing matter, however. It sounds to me as though many programmers are mad as hell and aren't going to take it anymore. This means no more high quality but inexpensive software, or perhaps no more software at all. All very unnecessary and self-destructive (I agree with Stu Olson's comments last month). It's not as if these programmers are saying "If you like this program send me $150 and your firstborn child". Most ask for $10-$20. Still too expensive for you? Remember the original price of Extended BASIC? Editor/Assembler? TI Writer? It appears we have short memories.

Would you like an even worse example of user self-destructivness? Several columns ago I reported that we were in the process of signing up with Navarone Industries "HYWAY" program. This was essentially a giveaway by Navarone, in exchange for a little user group publicity. The deal was that 8 times or so per year the group would be sent a new product to evaluate and present or demonstrate at a user group meeting. In exchange the group could keep the product and raffle it off or give it away. It should be noted that most of Navarone's products for the TI are in cartridge format, and apparently some user groups headed by pirates immediately dumped to disk the modules they received free from Navarone and began distributing them to their members. This takes some kind of award for stupidity. Nice going, boneheads! It goes without saying that Navarone immediately cancelled the HYWAY (robbery) program. How did Navarone find out about this? My guess is that someone in that group probably called them to boast about doing it. Make that a double bonehead! Terrific. You are clever enough to dump a module to disk and pirate it. Congratulations, soon you will have nothing left to dump except your unsupported computer, but boy, will that ever show them how

smart you are! You'll have to excuse me now, I think I'm going to be sick again.

THE MAIN EVENT: Sam Pincus

Events Chairman

We hope you enjoyed the first of the year's meeting as much as I did. It's amazing how the quality of graphics has grown over the past year or so. As you know, the consistantly high quality of our presentations ranks as a major reason why we have one of the premiere TI User Groups in the country. Dave Wakely and I hope that we can keep that same high quality in the coming year. Here are the plans we have made so far for the remainder of this year.

February: Jan Jankowski will give an hour presentation on the use of a TI computer as part of his hobby of amateur radio. This should be an interesting session for both those who are ham radio operators and also for those of us who are curious to see how the TI can be hooked up to other equipment. In addition, John Behnke will give more demonstrations of programs in our library. We also hope to have Burke Crane demonstrate how he uses his color printer.

March: This month is being set aside for question and answers. Our group's technical guru's will answer all (I hope) of those questions about the TI that have been bugging you. Another portion of the meeting will be hosted by our own Hank Ellerman who will explain what some group members are doing with the "Gram Cracker" package.

April: This is the last month to turn in your entries for the annual programming contest. Remember, this year we will have a Junior's division contest (for programmers 12 and under) as well as our regular contest. The presentation will be on Bulletin Boards. Todd Kaplan will talk about the features of Compu-serve, Tom Kirkpatrick will discuss the Source, and John Behnke and Butch Goldstein will show the latest features of our own board.

May: We will be demonstrating all of the winning entries in our programming contest.

June: This is the month of our big hardware/software raffle. Here's your chance to pick up a used piece of equipment at a reasonable price. It's also a good time to help the group by donating some of the stuff that you don't use any more to us so that it can be raffled off. Please give your donations to me or Dave before the June meeting (hopefully in May) so that we can establish a minimum bid price for your donation.

Summer: We are hoping to set up a summer picnic at Schiller Park for July 27th. We will keep you posted on progress as the year goes by. (P.S.- We will probably be asking for volunteers once spring finally breaks out.)

September: Nothing scheduled yet. If you have any ideas, let Dave or me know.

October: Ditto

November: The 4th annual TI FAIRE!!!

December: Election of officers and Swap-a-rama.

I'll be updating this list as time goes by. If you have any thoughts on what you would like to see presented or want to make a presentation yourself, just l et us know at the next meeting. We would especially like to talk to any of you who are doing exotic things with your TI gear.

FULL DUPLEX: Irwin Goldstein

This is my first column since the new bulletin board was instituted in mid December. There is a substantial amount of change in this new BBs over the previous board we all grew up with. The changes are for the most part very nice for both the users and the Sysop. The convenience factor has tripled and the amount of information available for transfer has more than doubled.

As for the changes: We are now at 1200 baud (*FAST*). This does not mean you can't use your 300 baud modem-you can! We have uploading. You may now send us your favorite non-copywrited programs so you can share with the rest of your fellow users. We have an expanded message base--95 messages can be stored and displayed at any time. Our download section is now divided into 4 sections. (1) Games, (2) Utilities, (3) Music and Graphics, (4) Education and (5) Other. We can eventually store approximately 125 programs within the new future.

Some of our changes are not all that easy to undeerstand. I will try to explain the questions many of you write to me about in the "private mail to Sysop" section.

FIRST: TO ENTER YOUR PASSWORD, it must be done IN ALL CAPITAL LETTERS!! If you enter your password in lower case, you will be displayed as an illegal password.

As a user, you are assigned a security level. Non passworded users are given a "0" with a 15 minute time limit, no up or downloading privilages, no private massage useage or private subboard access. Level 1 is for passworded members-20 minutes and all the member privilages. Level 1 members are allowed 4 downloads per day. Level 2 is 30 minutes and 6 downloads per day. Level 3 gets 45 minutes and 8 downloads. Everyone starts as a Level 2. For those that contribute to the Users' Group or the BBS are upgraded to a Level 3. Those that abuse their privilages are downgraded to a Level 1.

You may have noticed that when you use up your allotted time and try to call back immediately thereafter, you are not permitted access. This is to allow others to use the board. You may however, gain entry immediately after another caller uses the BBS. In other words you are not allowed to overly long consecutive calls. Those of you with the terminal programs that incorporate Xmodem, Xon Xoff protocalls, know that we now support these along with the old standard TEII. The Xmodem protocall along with 1200 Baud rate add up to a very fast file transfer system.

People with new passwords will,when entering the BBS for the first time, outomatically be sent to the new passord section. Please enter your full name, location, new password (2 to characters long) and phone

number. This info is for my records only and is kept confidential.

That should answer some of your questions about how the baord works and why some things don't work for you. If you still have questions, get me into Chat and ask me or leave mail to Sysop. I will get back to you.

Thanks for reading....SYSOP

FROM ILLINOIS BELL TELEPHONE

CONTRIBUTED BY MIKE POLONSKY

TO CANCEL CALL WAITING

BEFORE YOU PLACE A CALL,LISTEN FOR DIAL TONE

DIAL * 70(OR 1170 FROM ROTARY DIAL AND 10-BUTTON PHONES).

LISTEN FOR DIAL TONE AGAIN,THEN DIAL YOUR CALL

CALL WAITING IS CANCELLED ON THAT CALL,AND IS AUTOMATICALLY RESTORED WHEN YOU HANG UP.

WHEN YOU CANCEL CALL WAITING, SOMEONE CALLING YOU WILL GET A BUSY SIGNAL.

YOU MUST CANCEL CALL WAITING BEFORE MAKING MAKING A CALL.

HOWEVER,WITH THREEWAY CALLING YOU CAN ALSO CANCEL CALL WAITING DURING AN IMPORTANT CALL.

-DEPRESS THE SWITCHHOOK BRIEFLY TO PUT YOUR CALL ON HOLD.

-WAIT FOR DIAL TONE AND DIAL * 70(OR 1170).

-CALL WAITING IS THEN CANCELED FOR THE REMAINDER OF THAT CALL.

LETTERS TO THE EDITOR

The following is an open letter to Gary Kaplan of HCM. Feel free to copy it, sign it and mail it to him.

09JANB6

DEAR MR.KAPLAN,

It is now Jan.9,1986. Do you know where my copy of HCM V5N6 ie (The Orphan Chronicles) is?? My friend bought his at the store about 2 weeks ago! My subscription is supposed to end with V05 N07!

In other matters concerning the TI99/4A,I would like to advise you that it may be too late for you to "WAKE UP and SMELL the coffee"!!
What I am trying to say is that you seem to have sold us out!! First of all, most ,(375 out of the 400)TI99/4A owners I know, have disk drives,32K,EA and all kinds of other equipment. Why do you insist on not supporting us? What does he mean by that? (you think) . Well have a cup let me tell you!!

Most of the people I am acquainted with are saying the same thing. That is "I don't know if I shall subscribe or not".

Gary, (may I call you Gary?) everybody says the same thing,"WHERE'S THE BEEF". Comments I have heard range all over the spectrum.

EXAMPLE #1: "It seems that HCM has forgotten where they got their start." "Remember 99'er?"

EXAMPLE #2: "As a subscriber,Why do I have to wait 2-3 weeks after the stores get their copies." "I thought being a subscriber meant being first."

EXAMPLE #3: "On the cover it says 41 type-in programs, but there is only 2 pieces of junk for the TI."

Do you get the idea, Gary??

I am voicing the thoughts of a great number of TI99/4A users. I am not an idiot. The threat to you is if you don't start catering more to the TI users, you will be out in the cold with your "ORPHAN CHRONICLES".

EXAMPLE #4: "I think HCM is trying to be a Jack of all computers and master of none."

EXAMPLE #5: "It would seem that HCM has forgotten those that gave him his start." "Remember 99'er?"

I think by know the coffee ought to be about ready. I am dead serious as I write this.

How about running a PASCAL tutorial? You started it but left it when you decide ther wasn't any interest in it. I know a lot of people that are asking everyone they know if there is anything for the Pascal system. These people have the equipment ,but were left hanging by Texas Instruments and you too!! We depend on people like you to help us keep this machine alive!! You depend on us for subscriptions,right? A lot of people would like an assembly language geared for people who have very limited or no previous knowledge. That would be in EA and not MINI-MEM!!

Here is a program for you:

```
100 DIM(LOTS AND LOTS OF PEOPLE)
110 IF GARY PUTS MORE BEEF IN HCM GOTO 140
120 IF GARY FORGETS BEEF THEN 200
130 REM GARY"S FAVOR
140 PRINT "GARY MAKES MONEY"
150 PRINT "TI USERS HAPPY"
160 PRINT "TI USERS GO TO STORE TO BUY HCM"
170 PRINT "TI USERS ENTER A NEW SUBSCRIPTION!!!"
180 RETURN TO STORE NEXT MONTH OR ENTER NEW SUBSCRIPTION.
185 PRINT "EVERBODY'S HAPPY" :: STOP
190 REM GARY'S DEMISE
200 PRINT "TI USERS NOT HAPPY."
210 PRINT "TI USERS NOT RENEWING."
220 PRINT "GARY FIGURES IT'S A DEAD MACHINE."
```

```
230 PRINT "GARY LOSES MONEY."
240 PRINT "GARY HUNTS FOR MORE ORPHANS."
250 CALL CLEAR
260 END
```

This may seem humorous to you but I can assure you this program is running in the minds of hundreds of people.

Don't try to pacify me with a form letter from your office. All you have to do is heed the warning or not and watch what happens.

I don't take you for a fool!!

Most Sincerely,

Robert Stralko
138 Castlewood Dr.
Lake Marian, Ill. 60110

PS. I most heartily hope that you don't goof up!! Also this letter is no joke, just ask around. Do with this as you see fit. Don't say you didn't have any idea there was a problem.

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Dear Editor:

I have tried every BBS, helpline and UG that I can think of, and I still can't find a solution to my problem, so I am hoping that a letter in CHICAGO TImes will do the trick. Here's my problem: I am trying to use the buffered serial interface for my Gemini 10X printer, but the buffer does not get a "busy" signal to the computer and overflows, thus printing out garbage at that point. Is there anyone out there in TI Land who uses a serially connected Gemini 10X and who will tell me what's going on? The manufacturer was of no help, just reading aloud from the manual. I even Bought a $60 "smartcable" and replaced the serial board to no avail! I need to know the exact pin configuration for the RS232 cable and any other useful tips.

Thamks.
Thomas B. Kirpatrick, Jr.
Member #106/86

- - - - - - - - - - - - -

Hi!

My name's Monty Schmidt. I'm writing this letter to answer all of you who have written to me concerning myself and/or my software. First let me tell you a litle about myself. I am a 21 year old college student at the University of Wisconsin, Madison. I am majoring in Electrical Engineering and have been programming on the TI 99/4A since I was 16. I have worked in Forth, Basic, Extended Basic, Pascal, Fortran, and Assembly Language. I am always happy to help out those who have questions on anything pertaining to the TI!

Now on the software! Currently I have three programs in the public

domain. These are COMPACTOR, UNCOMPACTOR, and the TECHIE BBS SYSTEM. COMPACTOR is a program to change uncompressed assembly language files into compressed code. This cuts down your file size and the load time it takes to bring in the program. UNCOMPACTOR does exactly the opposite. It changes compressed object code file to an uncompressed one. This is nice if you would like to change it to run in an Extended Basic environment, add an outo boot flag, or would just like to try and view it.

The TECHIE system is a highly advanced bulletin board system made to run on the TI. It supports either 2 DS/SD drives or 2 SS/SD drives. The double sided verson includes 2 adventures, ASCII download section (includes COMPACTOR and UNCOMPACTOR), a REMOTE sysop feature and many others. If you would like to see a TECHIE in action you can call my board at 608-256-3192. There are many othersacross the nation and those numbers can also be found on my board.

So now you're saying to yourself what does this guy want for this stuff! Well here's the deal. First of all I need you to send a self-addressed, stamped disk mailer and 1 disk for COMPACTOR and UNCOMPACTOR and 1 disk for the TECHIE BBS system. Make sure and format them with your system so I know if you want double or single sided! Now alot of time and effort went into these programs an I am especially proud of the BBS! I ask that you send me a donation if you like them! Now remember if you honestly can't afford it I will understand. I'm a poor college student myself. However I am spending my time to help keep this machine from dying! Don't starve us authors too!

Well enough of this rambling! I hope this answers your questions and if you have others either write or call me.

Monty Schmidt
525 Wingra St.
Madison, Wi 53715

MEMBERSHIP CHAIRMAN SPEAKS: Don Jones

Unfortunately, I find myself back here again though I was hoping that this article would be unnecessary. Alas, our executive board had other ideas.

During the meeting of the executive board just before the last general meeting, it was decided that we should attempt to increase our membership by seeking out more members who live outside of the state of Illinois. The reasoning for doing this is as follows:

It is a very desirable thing for us to increase our membership. One important benefit is that a larger membership gives the group a greater income. These added monies allow the organization to do more things whose goals are related to the support of the TI user. A larger membership base also gives us more people to whom we can turn in order to accomplish the many tasks that are so essential to the smooth running of the group. It will also provide a greater store of experiences that we can call upon in the solving of problems and when seeking advice about the advantages of various hardware peripherals and software packages. The experiences of our brother/sister users can be invaluable aids for all of us as the experiences and mistakes of others

can save us valuable time and money!

The ability of our organization to support TI users is our whole "reason for being." For me, support means to create an environment in which a user can find needed help in using his machine. It also means providing information as to where one can find both needed hardware and software and at decent prices. The larger the number of users that we can support, help, aid, or minister to, the greater the number of active users. The more active users we have, the greater support they will give to creators of compatible hardware and software. We must never forget that it was the continued support of users, like those who make up our club, that has allowed our machine to live on after "Black Friday" and to be ressurected in the form of computers being built by both Myarc and Corcomp. (I might also add that having a machine is only the first step. We still need the software to make the thing into a useful tool. We must therefore listen to the likes of Stu Olsen. We need him and every other decent programmer.) The solution to keeping our machine alive lies with the people using it and the supporting companies and individuals who create things for the TI 99/4A. The "creators" are an extremely essential part of the TI environment. If we neglect to cultivate our own environment, we will destroy the only area in which we can exist.

Returning to the activities of the executive board, last month, a committee was formed for the purpose of finding ways to recruit more out of state members. As I was already the membership chairman, I was automatically made the chairman of the committee(groan). We met after the conclusion of the general meeting for the purpose of sharing ideas and deciding how we would put together an full page article for Micropedium. The first conclusion that we came to was that our present combination membership guide/application form says everything that needed to be said about our organization. It was decided that we would adapt it for our Micropendium ad by adding a covering statement that would address out of state users.

Another thing that came out of our committee meeting was to continue utilize a list of names of TI owners as we feel that there still exists a significant number of users who don't know about us. We would like to utilize the list in this way: We are looking for volunteers who would be willing to take the responsibility of getting a copy of our membership information guide with a special covering letter to some of the TI users who are not members of the group within their own zip code zones. These guides could either be mailed out or hand delivered to mail boxes. If the volunteers choose to mail these guides out, it must be done at their own expense as the high costs prohibit the group from mailing information to all of the people who are presently on our mailing list. It is for this reason that we are asking for volunteers. I will have a sign-up list at the sign-in table for anyone who is willing to work with the executive board on this important project. The list will also have a place for each volunteer to indicate how many addresses he/she is willing to dea with. Please come forward and help in this activity. If we are able to significantly increase our membership, our whole group will benefit.

During our committee meeting another significant idea emerged: This idea is for the purpose of encouraging out of state users to join: We would create a new membership status called, "The Non-Attending Member." A new member would pay $18.00 for this special status. At the

time of registration, the new member would receive the following: a.) A catalog of the group library, b.) a password to the bulletin board, c.) a single density sampler flippy disk or cassette of some of the best programs in our library in each of the following areas: 1.) games, 2.) utilities, 3.) education, 4.) business, and 5.) music & graphics. Lastly, the new member would receive a years subscription to our group newsletter. Members in this special category would not be prohibited from attending meetings. Also, a member need not live out of state in order to take advantage of this. A resident of Chicago who works on Saturdays may want to join in this manner. A new member who intends on attending all of the meetings may want to join in this manner in order to simply get the password to the board, the catalog, and the sampler disk/cassette. The advantage of joining in this manner is that though the member may be unable to attend the meetings, he/she still has access to the library and the board. We might even consider adding an extra page into the center of our newsletter that deals with what occurred in the meeting and/or any special hardware/software deals that can be dealt with by mail. At the time of renewal, members in this category would be charged the same rates for membership renewals that other members are currently being charged. I will have more on this matter after deliberating over it with the full executive board.

At the last meeting, we really got bogged down with our signing in proceedure. One reason was that we had more people than we usually have. I counted 138 members present. Another reason was that we were also attempting to pass out new membership cards at the same time. As we are getting larger, I have decided to change the sign-in proceedures for the group: Instead of asking people for their numbers, I have prepared four sheets with a place for the member's name and membership number. Each person will sign himself/herself in at the table by signing one of the four sheets. This is an experiment. If it does not work out, I will revert to the old system or devise another.

This concludes my report to the general membership on our present efforts towards enlarging our membership. I hope that I didn't bore you to death but the subject is an important one. Our efforts can be successful if all of us just do a little to help out. As there are no members being paid for what they do to help the group, it is not fair to expect a minority to sacrifice for the rest of the group. Whole civilizations have disappeared as a result of this kind of thinking.

BASICALLY YOURS: Rich Klein

Have any of you wondered just how Basic statements are stored in memory or on disk? Is a PRINT statement stored as P-R-I-N-T in memory? The answer to the second question is no. ALL Basic "keywords" are stored as one byte "tokens". A token is a single character representation of the *concept* of what the keyword represents.

Many of you "veteran" TI owners out there already have a list of Basic tokens for their corresponding keywords, thanks to the now defunct 99'er Magazine. But more than a few of you are relatively new to your consoles and do not have much of the early info on the 4A. For this reason, I have included a list of Basic keywords and their tokens. Also included is a list of Extended Ba sic keywords and their tokens. This list is taken directly out of GROM memory and as such, is as accurate as possible since the Basic interpereter refers to this list to assign a token. The list that is in Basic GROM is also in Extended

Basic's GROM with the addition of Extended Basic exclusive keywords as well. When you type a keyword, the basic interpereter reads the word and searches its list for that word and when its found, the token that immediately follows it in the list is stored in the appropriate place in memory in place of the word you typed. It is displayed on the screen as typed, but stored in memory as a token. When you list a program line, each token is converted to a displayable word and then sent to screen memory (displayed). This is also true when a line is brought up for EDITing. When corrections are made, then the line is reassign edits proper tokens and replaces the original line in memory. Why are tokens used? Tokens are used to save memory. As long as the computer knows what a certain combination of numbers are for, it doesn't matter what they are, and obviously, if they are only one character long, then more will fit in memory. This means longer programs will fit into less memory. If you look at the list included in this article, you will see that the token for PRINT is Hex 9C or Decimal 156. This means that if the computer "sees" a Hex 9C, it knows that it must PRINT whatever follows. If you carefully scan the list, you will notice that some keywords have the same token assigned as another. If you look a little closer, you might notice that one word is an abbreviation of another and means the same thing. Therefore, it is assigned the same token. Without further ado, here's the list:

Basic Keywords Tokens.

Keyword	Hex	Dec	Keyword	Hex	Dec
)	B6	182	(	B7	183
&	B8	184	^	C5	197
=	BE	190	*	C3	195
/	C4	196	+	C1	193
-	C2	194	<	BF	191
>	C0	192	:	B5	181
;	B4	180	@	FD	253
,	B3	179	GO	B5	133
IF	B4	132	ON	9B	155
TO	B1	177	DEF	B9	137
DIM	BA	138	END	BB	139
EOF	CA	202	FOR	BC	140
LET	BD	141	REM	9A	154
SUB	A1	161	TAB	FC	252
ABS	CB	203	ATN	CC	204
COS	CD	205	EXP	CE	206
INT	CF	207	LOG	D0	208
RND	D7	215	SGN	D1	209
SIN	D2	210	SQR	D3	211
TAN	D4	212	LEN	D5	213
POS	D9	217	VAL	DA	218
ASC	DC	220	REC	DE	222
NEW	01	001	RUN	00	000
CON	02	002	NUM	05	005
RES	07	007	BYE	04	004
OLD	06	006	BASE	F1	241
DATA	93	147	EDIT	09	009
ELSE	B1	129	GOTO	B6	134
NEXT	96	150	READ	97	151
STEP	B2	178	STOP	98	152
THEN	B0	176	CHR$	D6	214
SEG$	D8	216	STR$	DB	219
LIST	03	003	SAVE	08	008

CALL	9D	157	OPEN	9F	159
BREAk	BE	142	GOSUB	B7	135
FIXED	FA	250	INPUT	92	146
PRINT	9C	156	TRACE	90	144
CLOSE	A0	160	OPTION	9E	158
RETURN	B8	136	NUMBER	05	005
OUTPUT	F7	247	APPEND	F9	249
UPDATE	F8	248	DELETE	99	153
UNTRACE	91	145	UNBREAK	BF	143
RESTORE	94	148	DISPLAY	A2	162
CONTINUE	02	002	VARIABLE	F3	243
INTERNAL	F5	245	RELATIVE	F4	244
RANDOMIZE	95	149	PERMANENT	FB	251
SEQUENTIAL	F6	246	RESEQUENCE	07	007
Extended Basic Additions.					
!	B3	131	::	B2	130
AT	F0	240	OR	BA	186
PI	DD	221	ALL	EC	236
AND	BB	187	MAX	DF	223
MIN	E0	224	NOT	BD	189
XOR	BC	188	[deleted-in Basic		
BEEP	EE	238	RPT$	E1	225
SIZE	EB	235	DIGIT	E9	233
ERASE	EF	239	ERROR	A5	165
IMAGE	A3	163	MERGE	08	008
USING	ED	237	ACCEPT	A4	164
LINPUT	AA	170	SUBEND	A8	168
UALPHA	EA	234	NUMERIC	E8	232
SUBEXIT	A7	167	WARNING	A6	166
VALIDATE	FE	254			

There many uses for tokens outside of GROM. One such example can be found inthe NOV. 30, 1985 edition of this publication beginning on page 24. The exampleis the first listing of the sideways printing program which makes use of tokensin a MERGE type file to create DATA statements for the second listing to use.Other things possible are using the token list to see how programs are storedin memory or on disk. Of course, you must have the means to look into thesevarious areas. One of the things you might find is the fact that the token listis not quite enough to create your own listings from tokens. There are codes to indicate things such as quoted strings, variables and such. To indicate the statement, PRINT "HELLO, THERE", you wouldn't see any quotation mark. You will see a Decimal 199 followed by a 12 for our example above to indicate the length of the text between the quotation marks. Of course, before the 199, you would see a Decimal 156 to indicate a PRINT command. A lot of this might be confusing, but if youv'e got MINIMEM, you can write short programs and save them to the cartridge and then PEEK out the memory in there. Then you can use this list to find the tokens you can and figure out the rest. Try this routine:

First, write a short Basic program and SAVE it to MINIMEM. Type NEW, enter the following program, and RUN it:

```
100 FOR A=28672 TO 29000
110 CALL PEEK(A,B)
120 PRINT B;CHR$(B),
130 NEXT A
```

This routine looks at the first 328 bytes of MINIMEM's RAM (Random

Access Memory), prints the value stored at each location and its ASCII code, if any. That way you can use text as a reference to find tokens. If you follow the program listing I mentioned previously, the first two characters written in the first loop are line numbers. These numbers are incremented by five and, as you can see, they are not stored as numbers, but as binary values (CHR$(0);CHR$(5)... line 5). When you use the CHR$() function, you place values, and its up to the device in which the values are placed to determine its meaning.

After the line number is written, then CHR$(147) is written. This, according to the table, is the token for DATA. Then a character pattern is read and converted, CHR$(199) is written followed by CHR$(8) to indicate a quoted string eight bytes long. This is followed by the eight byte converted pattern. If five patterns haven't been written, then a CHR$(179) is written to indicate a commato separate the patterns. When five patterns have been written, a CHR$(0) is writen to indicate the end of the program line. When all the patterns and program lines have been constructed, two consecutive CHR$(255)'s are written to indicate the end of the program. Try the program out, analyze the listing and compare the listing with the results and create a few examples of your own. Start simply, and increase complexity until you are satisfied with the knowledge you've accumulated.

I hope that this was interesting and not too confusing, but I thought that you might share my interest in how Basic statements are built. Perhaps you will never use what you may have learned directly, but it may help to understand other aspects of Basic. Let's go on to something else. How many of you are irritated by the placement of the Quit key? Have you lost entire programs in their final stages of completion because you pressed <FCTN> = instead of <SHIFT> + ? If you have Editor/Assembler or MINIMEM, you can disable the Quit key while in Basic. If you have Extended Basic and Memory Expansion, you can disable it in Extended Basic. This is accomplished with a simple CALL LOAD statement which can place values directly into memory.

If you enter:

CALL LOAD(-31806,16) the QUIT key will be disabled. This is done by placing the value of 16 intoRegister 1 of the Interrupt Workspace. Since the Quit key is checked wheninterrupts are serviced, there is a location that tells whether or not to checkfor this keypress. Placing 16 here sets that particular bit and says not tocheck for QUIT.

CALL LOADs can be used in Command mode or in running programs. You can disable the quit from within a program as well. Once the Quit key is disabled, the Quit key can be scanned as a normal keypress. If you include some lines of basic program to check for the Quit keypress, then you can combine it with another CALL LOAD to allow optional Quitting directly from Basic. This could be a unique way to exit a program. Here is an example listing to illustrate:

```
100 CALL LOAD(-31806,16)                    Disables the QUIT key
110 CALL KEY(0,K,S)
120 IF S=0 THEN 110
130 IF K<>5 THEN 170
140 INPUT "ENTER Y TO CONFIRM ":A$
150 IF A$<>"Y" THEN 110
160 CALL LOAD(-31804,0,36)                  Returns you to Title screen
170 PRINT CHR$(K),
```

180 GOTO 110
This illustrates that it is possible to QUIT directly from Basic and underBasic control (opposed to by accident). I wanted to show some other CALL LOAD'sthat might be of some use to a Basic programmer, but most of these would onlybe of use in specialty programs and of little general use. That about wraps things up for this month. I hope the info above can be of some use to you. See you soon!

SOFTWARE REVIEWS: Jack Topham

$10 will cover the FREEWARE cost for the latest Version (2.0) of the Disk Utility that has had several prior names. John Birdwell has put the polish on the program and calls V2.0 'SECTOR UTILITIES' . The program is written in Assembler program image and can be loaded by TI/W or E/A modules. An XB loader is also available.

The program competes favorably with DISD+AID-O and allows you to explore your disks easily and to change the files if you dare. One super feature is the Disk Report utility. It lists all the files and prints out the sector ranges of each file. Output is either HEX or ASCII as is the search feature, and can be to screen, printer, or disk.

Another nice plus is the ability to compare two disks and print out the sectors that do not match. Add the color change utility and you have a very nice package at a bargain price.

A nice program for CALLing a 64 character screen in XB is available for free. I downloaded the SOURCE code off TI NORTH. When assembled the program allows you to CALL LINK "DISP64",ROW,COL,S$) in an XB program after you have loaded the Object file by the name you gave it during assembly. If you use the E/A module you will need to include the E/A file RSCSUP. If you load with the MM module you will not need this Basic support file.

The teeny letters really test your monitors resolution even tho I suspect that the TI modulator is not really up to the whole task either. 64 columes for the taking. Have fun.

At the Faire I upgraded my old PFKeys program with the latest PCKEYS from TECHNI-GRAPHICS. The program provides the same type of UTILITY that IBM does on the PC with their FUNCTION keys. Once loaded into the lower part of the MEMEXP(PEB 32K), the defaults for CTRL 1 thru 9 are respectively: RUN, LIST, NUMBER, RESEQUENCE, OLD DSK1., RUN "DSK1.LOAD", SAVE DSK1., CALL LINK("COLOR",16,2), and LIST "PIO". Now defaults are nice, but....PCKEYS allows you to change each one to your choice up to 140 characters each max! You can save these personal defaults if you wish to to disk. The saved file can be one of many so each use can be customized.

PCKEYS also provides a DISK CATALOG and SCREEN DUMP utility which adds to its usefulness.

TECHNI/GRAPHICS
443 PERRIE DR. #302
ELK GROVE VILLAGE, IL 60007

I really must comment on a program I was given as a bonus when I

ordered the GRAM KRACKER at the FAIRE, 'EXPORER'!

In a nutshell EXPLORER allows you to see all that goes on inside the computer when running programs, or Command Modules. With few resrictions Assembler programs are fair game as well. EXPLORER sets up an operating system that can be stepped thru the instruction set line by line or run slowly. You can toggle between the program screen and user selected memories as well as watch the registers change. The next instruction is displayed at the bottom of the screen!

I have walked thru several Modules and a number of simple Basic programs. It is quite a show. Craig Miller says EXPLORER can be dangerous thru loss of sleep! How very true! Several additional files come with GRAM KRACKER to tie it all together. A full editor is included so you can do more than watch if you have a mind to jump in. Assembly Heads will go wild over this superb piece of diagnostic and creative software.
I can't close without a word on the GK. Today I had a main screen at power up with 7 (yes seven!) items on the menu. All my Command Modules are now saved to disk. Some are already altered to be more usefull. Basic programs are easily saved for menu selection as well. Much more on GK next time.

Lastly, MYARK should be shipping Level 4 Extended Basic as I write this. It's been a long wait but in the end the MYARK products have been good. A new version of DM Supreme with lots of added frills has been released but it Requires the latest PROM (E) on the card.

PRACTICAL PROGRAMMING PRACTICES

The following is tribute to the CHICAGO BEARS written by Danny Goldstein

```
 1 CALL CLEAR
 2 CALL CHAR(65,"0000000001020408")
 3 CALL CHAR(66,"00011EE0")
 4 CALL CHAR(67,"00F303")
 5 CALL CHAR(68,"0000804020100808")
 6 CALL CHAR(69,"0808081030 7F0001")
 7 CALL CHAR(70,"0000000106018 0C0")
 8 CALL CHAR(71,"0000FB040004F8")
 9 CALL CHAR(72,"0402020101010101")
10 CALL CHAR(73,"0204040404040405")
11 CALL CHAR(74,"4040404040A020")
12 CALL CHAR(75,"00000000000000E0")
13 CALL CHAR(76,"01010101010E0830")
14 CALL CHAR(77,"1EF484844850A0C0")
15 CALL CHAR(78,"11111008040301")
16 CALL CHAR(79,"1010E000010204F8")
17 CALL CHAR(80,"20204080")
18 PRINT "    ABCD"
19 PRINT "    EFGH"
20 PRINT "    IJKL"
21 PRINT "    MNOP"
22 GOTO 22
```

This second program honoring the BEARS was submitted by John Behnke.

```
100 REM "GO BEARS GO"
110 REM BY JOHN BEHNKE
120 REM BASIC OR X-BASIC
130 CALL CLEAR
140 FOR R=17 TO 22
150 FOR C=13 TO 18
160 D=D+1
170 READ A$
180 CALL CHAR(D+96,A$)
190 CALL HCHAR(R,C,D+96)
200 NEXT C
210 NEXT R
220 A$="        GO BEARS GO"
230 PRINT A$: : : : : : : :
240 GOTO 240
250 DATA 0000000000103070F
260 DATA 070F3FFFFFFEF8F0
270 DATA FFFFFFFFFF0000FE
280 DATA 80E0F8FEFF7F3F1F
290 DATA 00000000000080C0E0,0
300 DATA 0F1F3F3F7F7F7FFF
310 DATA E3C78F0F0F8FC7E3
320 DATA FFFFFFFFFFFFFFFF
330 DATA 0F87FFFFFFFF870F
340 DATA E0F0F8F8FCFCFCFE,0
350 DATA FFFFFFFFFFFFFFFF
360 DATA F0F8FEFFFFFFFFFF
370 DATA FC0001FFFFFFFFFF
380 DATA 3F7FFFFFFFFFFEFC
390 DATA FEFEF0C080000000,0
400 DATA 7F01
410 DATA FFFFFE7E7E7F7F7F
420 DATA FF1F0F0F0F1FFFFF
430 DATA FCFCF8F8F8F8F8F8
440 DATA 0,0,0
450 DATA 3F3F3F1F1F0F0F07
460 DATA FFF8F8FFFFFFFFFF
470 DATA F80F00F80FE3F0CC
480 DATA 00F80700F8078161
490 DATA 0000F80404784040
500 DATA 0,01,FF7C,03
510 DATA 1A8660180601
520 DATA 8080806020C
```

GO BEARS GO

- - - - - - - - - -

VCR TITLE SCREEN ADDENDUM

John Hedstrom

The January 1986 COMPUTE! has an alternative character set for "That Other Computer" on p.108-109 (in an article by Charles Brannon, Program Editor). It's a very nice-looking emphasized font with true lowercase descenders. So what you may ask? Well, it just so happens that the character definiton data is directly transferable to the TI. For example, you can combine this new character set with the "VCR Title Screen" program that was in the October 31, 1985 CHICAGO TIMES.

We are interested in the 8 2A-digit hex numbers following the colon. Disregard the last 2-digit number. Also remember that trailing zeros

can be left off in a CALL CHAR statement. Some changes are needed to fit the TI ASCII code scheme. Here's what you add between lines 120 and 130 of the VCR program (avoid erasing line 130 by resequencing occasionally):

```
FOR A=33 TO 126
READ C$
CALL CHAR(A,C$)
NEXT A

DATA 7108-71F8 (ASCII code #33 to 63), 7000(#64),
7208-72d0 (#65-90), 70d8 (#91), "00c06030180c06"
(#92, reverse slant), 70e8-70f0 (#93-93),
"00000000000000ff" (#95, underline), 7200 (#96,
grave="left apostrophe"), 7008-70d0 (#97-122),
72d8-72e8 (#123-125), "000070db0e" (#126, tilde)
```

The data statements start at entry 7108 with the exclamation point (ASCII code #33): DATA 183C3C18180018, and so on. The data do not have to be enclosed by quotation marks. (Variables: a = ASCII code number, c$ = character definition string.) (the definitions at 7000 to 72f8 are repeated in reverse video at 7400 to 76f8).

- - - - - - - - - -

Lottery Numbers program in TI Basic
John Hedstrom

The Illinois Stat Lottery's weekly "lotto" game require the selection of six numbers from 1 to 44. This program generates 20 sets of six random numbers. There are two chances per each $1 Lotto ticket so it costs $10 to play 20 chances. The six winning numbers are drawn every Saturday night. First, second and third cash prizes are awarded for matching six, five of four of the six winning numbers. The superstititious among us might want to run this program at the stroke of midnight while chanting a mantra. But I'll leave all such amgical incantations to the imagination of the user. If anyone hits the jackpot using this program, it of course automatically mutates from freeware to fairware! In other words, please remember this impoverished author and this splendid users group as you embark on your extravagant spending spree! (Variables: A = array, C = chance, L = loop, N = number.)

Program listing:

```
100 REM  "Lottery Numbers"
110 REM  by John Hedstrom
120 REM  February 14, 1985
130 OPTION BASE 1
140 DIM A(20,44)
150 CALL CLEAR
160 PRINT "Illinois State Lottery":"Six numbers from 1 to 44"::
170 FOR C=1 TO 20
180 PRINT :C;"=";
190 FOR L=1 TO 6
200 RANDOMIZE
```

```
210 N=INT(44*RND)+1
220 IF A(C,N)=0 THEN 230 ELSE 210
230 A(C,N)=1
240 NEXT L
250 FOR N=1 TO 44
260 IF A(C,N)=0 THEN 280
270 PRINT N;
280 NEXT N
290 NEXT C
300 GOTO 300
310 END
```

PROGRAM NOTE:

The challenge in generating six unique random numbers is in checking for duplication. The technique used in the program above is a bit of an overkill but saving RAM isn't a priority here. A 2-dimensional, 880-element array (20 chances x 44 possible numbers) is set up to keep track of the 120 values chosen (20 chances X 6 actual numbers). Before any numbers are chosen, the array elements are all zeros. After a number is chosen, the corresponding element in the array is falgged with a "1" in line 230. If the computer chooses the same number again within a set of six, the duplication is detected by line 220 (the lack of a zero) and the computer is sent back to line 310 to generate another number. Lines 250-280 put the six numbers in order. (There is however no protection in this program against generating identical sets of six. But the odds of that happening, like the odds of winning, are extremely poor!)

A FIFTH OF FORTH: Bill Fisher

I have finally succeeded in converting a school grade report program from Basic to Forth. As with any language, the next one must be easier. The program does run much faster. I have to say I'm hooked on this language.

I'm including a few routines that work which might be of interest to others. Or perhaps ther is a better way. I'd like to hear about it.

A big problem was to convert internal numbers in basic to hexidecimal numbers. Screen #14 expects the address on the stack of a number in the input file buffer. It then converts and leaves a hexidecimal number on the stack, to be moved in a following step to storage. Example: 084106 converts to 106.

Screens 12 & 13 show file reads and printing. Other problems included converting hexidecimal to ASCII for printing (not shown).

I'd like to compare notes with others who have been working with Forth. My address is Bill Fisher, 3321 Noyes St., Evanston, Il. 60201.

```
 SCR #12
  0 ( TEST READ/PRINT ) BASE->R HEX
  1 0 VARIABLE BUF1 FE ALLOT 0 VARIABLE PBUF 4E ALLOT
  2 PABS @ A +   BUF1 1700 FILE INF1  0 VARIABLE PLIN
  3 : INF1DF INF1    SET-PAB RLTV FXD INTRNL
```

```
 4  FE    REC-LEN  F-D" DSK1.WORCULTST" ;
 5 : INF1OP INF1DF OPN ; : INF1RD INF1DF REC-DO RD ;
 6 : INF1CL INF1DF CLSE ;
 7 PABS @ 30 + PBUF 2100 FILE PRNTR
 8 : PCLR PBUF 50 0 FILL 0 PLIN ! ;
 9 : PRTDF PRNTR SET-PAB DSPLY SQNTL VRBL 50 REC-LEN
10    F-D" PIO" ;
11 : PRTOP PRTDF OPN PCLR ; : PRTWT PRTDF 50 WRT PCLR ;
12 : PRTCL PRTDF CLSE ;
13
14
15 R->BASE

SCR #13
 0 ( TEST FILE ) BASE->R HEX
 1 0 VARIABLE BUF2 32 ALLOT 0 0 VARIABLE POS1
 2 PABS @ A +  BUF2 1900 FILE INF2
 3 : INF2DF INF2
 4  SET-PAB RLTV FXD INTRNL
 5  32 REC-LEN F-D" DSK1.WORCULT" ;
 6 : INF2CL INF2DF CLSE ; : INF2OP INF2DF OPN ;
 7 : INF2RD INF2DF REC-NO RD DROP 0 POS1 ! BUF2 ;
 8
 9
 0 R->BASE
11
12
13
14
15

SCR #14
 0 ( CONVRT BASIC INTRNL NUMERS ) BASE->R HEX
 1 : NUMR 1+ DUP C@
 2       DUP 0  = IF DROP 1 + C@ ( ZZERO)
 3  ELSE DUP 40 = IF DROP 1+ C@ ( POSITIVE - UNDER 100 )
 4  ELSE DUP 41 = IF DROP         ( POSITIVE 101 TO ABOUT 25000 )
 5   1+ DUP C@ 64 * SWAP 1+ C@ +
 6  ELSE     BF = IF       1+ C@ FF00 + ( NEGATIVE - UNDER 100 )
 7  ELSE 1+ DUP C@ FF00 + 64 * SWAP 1+ C@ + FF00 +
 8  THEN THEN THEN THEN ; ( NEGATIVE 101 TO ABOUT 25000 )
 9
10
11
12
13 R->BASE
14
15
```

[ED NOTE: If anyone has any comments please send them either to Bill at the address provided or in care of the Users' Group PO BOX or upload them to the UGBBS at 312-966-2342.

TECH CORNER

MINI PE BOX: Andy Chernivsky

Those of you who attended the January meeting heard my presentation on my Mini P.E.Box. After the presentation many of you came over to my table to look at it and ask questions about it. By many of the questions it was clear to me that many of you just plain did not understand what the Box was all about. I will try to clarify its use and try to explain how it came about and maybe some construction details.

Ever since I expanded my TI the P.E.Box has been a source of aggravation to me. First the fan got on my nerves(and still does) then there was the size of the thing. I finally ended up mounting it upside down under my work table. At least there it is out of my way. It turnes out that the fan is basically there to cool the power regulators for the internal drives. The rest of the components get along just fine with natural convection (at least in my box(that was a disclaimer if you were wondering)) so the fan will be off soon as I took my internal drive out.

As to how the Mini Box came about. A while back I acquired a Myarc disk controller which left me with an extra TI controller card ,which I keep around just in case. A while later I installed an internal 32K memory in my console (some one else is writing about that one, I will say that it works perfectly) which left me with an extra 32K card. About this time my children started to want to use my TI every time I was working on it. Eventually I set up another console so they could do there thing and I mine.

Soon the Command Modules were not enough for my daughter and I new I was in deep trouble. I did not want another TI box but the only other alternatives were CorComp and Myarc, both priced out of sight. As far as kits were concerned the only one I have ever seen is from a place called The Captains Wheel in Minnesota, but I didn't like the size or the fact that it plugged directly into the console and would be always in the way.

Unfortunately for my wife (projects like this are real time robbers), it looked like I would have to build it myself. At first I was looking for an enclosure that could house one full height drive and two TI cards. Then I noticed that the cards were almost the same size as a drive and I wondered if I could fit them into a standard enclosure, but try as I might they just would not quite fit. Then I decided to take the cards out of the protective covers (handle them carefully please!) to see if they would fit any better. Eureka!!! The cards are the same size as a drive and three will stack in the same space as a half height drive. Now we are getting somewhere. With these new developments in mind I took another look at a single full height enclosure with power supply I had sitting around and the final product started to take shape.

A half height drive and two cards plus a cable interface card would fit comfortably in my enclosure. I decided that two card slots would be enough as this unit was intended for the kids and all they needed was 32K and a disk controller. If later I wanted to add an RS 232 I could put 32K in the console, remove the 32K card from the box and insert the RS 232. This would give me a fully expanded system with only two

slots.

The cards require a 60 position card edge connector to plug into. A normal surface mount plug of that type caused the card to stick up too high for the top of the enclosure to fit. I found another type of the 60 position plug that would snap on to ribbon cable and allow me to mount it from the under side of the enclosure thru a rectangular hole I cut in the bottom. These connectors cost $10 each but they allowed the concept to work and my kids are worth it right? I mounted these connectors right against each other and against the left side if the enclosure. This left just the correct spacing for the cards to the enclosure side and top and to each other. I should also mention that the cards have two voltage regulators mounted on them. I mounted a small heat sink to each one to help them dissipate their heat. In there TI clamshells they are camped to the card by the clamshell corner screws and the cover itself acts as a heat sink.

Just to the right of the 60 position plugs I mounted a 44 position card edge connector which would hold the interface board to go from the 44 position peripheral port on the console to the 60 position plugs for the cards. For the plug into the console I used a 44 pin (position) card edge connector mated to a gutted 50 pin business telephone type connector. The two were joined with epoxy and the age old source of expansion irritation (that huge plug) was neatly solved. For the cable from console to box I used 40 conductor shielded, stranded computer cable. The shielding is very important as unshielded cable will cause strange patterns on the monitor. 40 wires are quite enough as you really only need 35 to do the job. I ran the cable out the front of the box, between the front feet. This way the box sits on the right side of the monitor about a foot behind the console with the cable going straight out and plugging right into the console neat as can be.

The bottom of the interface board plugs into the 44 pin card edge connector which solders on to the cable which goes to the console. At the top of the interface board is a 60 pin plug set. One side is soldered to the interface board and the other snaps on to the 60 wire ribbon cable (more expensive plugs). The ribbon cable then goes down parallel to the interface board and snaps onto the two 60 position plugs mounted in the case bottom.

The boards require that three unregulated voltages be supplied to them. Measuring my TI P.E.Box I got +13 (to be regulated to +5 volts on the individual cards), +22 (+12 after regulation) and -22 (-12 after regulation). When I measured my drive enclosure before the regulators I found +10 and +19 which is plenty to do the job. To get the negative voltage I added a small transformer, rectifier and capacitor to the enclosure behind the transformer that was already there.

Now to the hard part. The interface board. Since this was a proof of concept project I hand wired the board on a piece of Radio Shack 44 position card edge finger PC board. That little board took two all night shifts (the birds were waking up when I went to bed) and a few daylight hours besides. The interface is basically just running the wires from the console and the cards to each other, to ground or to +5 volts with one exception; the data bus wires. They have to go thru a buffer that protects some of the more sensitive chips in the console. The buffer is mounted on the interface board and the +5 volts it needs is supplied by the 5 volt regulated supply for the drive.

Thats about it. It cost about $60 and 30 hours exclusive of the TI cards, the drive and the enclosure. That is to say the conversion of parts I already had cost that much. The finished product works perfectly and makes the TI an easily portable computer.

There was a lot of interest in this conversion at the meeting. First I want to point out that unless you check and double check your work on a project like this you might make a mistake which could cost you a card (smoke and sparks, if you catch my drift). The job is not really hard with the exception of the interface card. I was toying with the idea of building another one of these for myself but the next time I would have a PC board made up for that card. What the heli, If I make one I might as well make a few more while I am at it. I did not do this as a business venture and with all the TI cheap skates and cut throats out there I really don't want to BUT if anyone is seriously interested and not in a super rush I will see what we can work out. Remember this is just a hobby, most of my time is spent making money to let me keep this hobby up.

Any questions just see me at the meeting or drop me a line at 106 56th Ct., Downers Grove 60516

SPEED UP YOUR DISK DRIVE

Hank Ellerman
12ms TI DISK CONTROLLER

There is a update for the TI disk controller that will step the head of the drive at 12 milliseconds, not 20 milliseconds as the controller does as standard from TI. It is a fairly easy conversion. It took me about 30 minutes to convert mine. Mack McCormick came up with the originial conversion for this parts swap. All you have to do is replace a chip. Sounds easy ha. You have to desolder the originial chip run 2 jumpers and solder in a chip socket then plug in the chip. Takes some expertice but can be done with not to much experiance. I have all the parts you need. That is: The chip, that is programed. The chip socket, to hold the chip. The Documentation and drawing. THIS WILL NOT WORK ON THE PHP 1250 (Shugard) DRIVES. Most other drives this conversion will work on. You can make your drives access the information faster and save time and ware and tear on you drives and less noise.

Send a appropreate mailer and return postage and $8.00 to: Hank Ellermann 4023 N.Odell Ave. Norridge,IL 60634 453 7831

I will be at the FEB 1st meeting, see you there.

THE LIBRARY SHELF

The Freeware Top 20

This is a new regular feature that will be appearing in the TImes. We hope this will show what is the most popular TI software in our library. The rankings are based on total sales of Freeware packages in our library. The charge for Freeware programs will be $2. One dollar for the disk and a dollar for duplication fee. The Freeware section of the library is separate from the public domain section and all Freeware programs are distributed individually - One to a disk. You are encouraged to send the authors of these programs the amount asked if you like the program. So here are the rankings:

Top 20 as of 01-30-85

1. Fast Term
2. DM-1000
3. JP-Graphic
4. C-99
5. Sprite Builder
6. TK-Writer
7. Screen Dump
8. Disk Master
9. Disk Jacket II
10. Neatlister
11. Disk/File Libraries
12. Cannonball Chess
13. Assault The City
14. Alphabet Game
15. Mass Transfer
16. 40 Colum Package
17. TI Writer Manual II
18. Pilot 99
19. Weather Forcaster
20. Compressor

RAM BUGS?: Texincia Lubbock

Well, howdy there partners! Here I am again, your favorite TI groupie. I know that you always do miss me. Well, have no fear, Texincia is here!

First, I wish to apologize to my good friend, and another lady, Ms. Carole Goldstein, for having gotten a little carried away with myself last month. You see Carole, I was suffering from a case of the "spleen" and when I'm with the "spleen," I sometimes don't know what I'm doing or saying. I'm sure that you will forgive me as you too are a lady and you must understand that it is a lady's perogative to sometimes become a little temperamental; one of the perquisites of the gentler sex.

Can you fellas believe that I didn't know that Stu Olsen was going to write his well written article on how to commit suicide for $10.00? The fact that I chose to deal with the problems of "fair-ware" in the same issue was entirely coincidental. I realize that I was righteously indignant but after reading what Stu said, I am satisfied that my ire was well justified. It's a darned shame that there are so many users who treat fine programmers, like Stu, so shabbliy. The irony of the case is that the same clowns who think that it's a big joke to pirate everything in sight are only cutting their own throats. One day after the jerks have finished abusing, frustrating, and discouraging the work of our sincere and hardworking programmers, they will wake up and find out that they have finally won the battle that they have been so assiduously waging: All of our programmers will have come to the realization that there is no money to be made in writing for the TI 99/4A computer. The most logical response for them to make will be to, a.) Change and go over to some other computer (where the same problems abound) or b.) go into some other line of work that will "bring home the bacon." What will the pirates do when they have succeeded in

driving all of the programmers and companies away from the creation of programs? Will they then find another computer community to destroy? I wouldn't doubt it one bit!

We must admit that our computer can be likened to atomic energy. If it is judiciously used, it can be a very creative tool. Used unwisely, it can destroy its user. It seems that the pirates are trying to cut their own throats by actively working to dissuade writers of [good programs for our computer from practicing their craft. Such behavior is illogical as it is self destructive. It makes just about as much sense as working to build a program that will eventually cause your own computer to self destruct. To me this is foolish. Stu, I'm sorry that you have received so little for your fine work. Please see me in the back of the meeting hall and I will be happy to give you something [more!

It seems that my last articie offended someone who called himself "Mark." He attempted to post an insulting message for me on our bulletin board. I say "attempted" because he only succeeded in making it clear that he could not think his way out of a paper bag. I hereby condescend, this one time only, to address the following to the person who called himself, "Mark."

Maybe there are several freeware terminal emulator programs for the I.B.M. computer. If so, more power to you but you missed the point. Programs that existed simultaneously for [both the I.B.M. and the TI computer were much cheaper for the TI even before TI got out of the home computer biz when such programs demanded top dollar prices. Now that Texas Instruments is no longer involved with the 99/4A, you will find that the price of the best programs available for the TI are only a fraction of the prices being asked for the most expensive I.B.M. software packages.

Also, in your juvenile attacks on this lady you said that you took great offense at my closemindedness towards other computers. Why, in the name of heaven, should someone become offended at what another person chooses to do with her own mind? Whether you like it or not, it is [my mind and being an adult (I'm really 21 going on 22) only I am responsible for what I choose to do with my mind. If you don't like what I choose to do with [my mind, then see me in the back of the Fireside Lounge and I will tell what you can plug [your computer into! Your admonition that I should be more open minded makes just about as much sense as going into a synagog and telling the people there that they should be more open minded about Islam or Christianity. What you are saying may be true but [that's not the reason that the people are there. In a like manner, TI bulletin boards and related newsletters are not created to deal with apple cores, commie doors, I.B.U.M.s or any other computers.

If anyone should be offended, it should be me. I am giving my opinions in a publication that is intended for users of the TI 99/4A computer. My comments are directed to members of an organization that is attempting to keep alive a spirit of hope in the hearts of those guys and gals who still have the heart to remain loyal and true to their original computer, the good ol' 99/4A. My column is not written for a bunch of apostate creeps who lurk around on a board that has nothing to offer them except the opportunity to sow their seeds of slander against the machine that they didn't have the guts to stick with. I find your

dirty, despicable, dastardly and devisive deeds of attempting to create discontent and discouragement within our ranks to be bereft of any merit whatsoever and not even deserving any comment or consideration. Again, I ask you, why do the clowns hang around on a board that has nothing to offer you? I believe that the reason is that you are not receiving the personalized support and attention that our great users' group provides to its members. Why aren't those of you who own I.C.B.M. computers spending you time on *I.C.B.M.* bulletin boards? I find it very difficult to find the time to deal with all of the boards in the Chicago area that are devoted only to the TI computer. What is it that we have that you want? I think what you are looking for is confirmation that your machine is all that you once thought that it was. Instead of doing this in a positive manner, by immersing yourselves more deeply into your machine, you have chosen the negative path of despicable dastardly derision against another machine which you would like to be compared with. The best thing that you can do for me is to get in your I.C.B.M. and light the fuse!

At the end of your message, you had the termerity to challenge me to a, "WAR OF WORDS" in the argument section of the TI West bulletin board. Someone once said, "If you lieth with dogs, you shall riseth with fleas." As I am a *lady* I must therefore respectfully decline to enter that realm in which you seem to find both solace and comfort. But don't misunderstand me, I really do like the idea of having the argument section. It keeps a lot of the filth off the rest of the board and the other TI boards but I do not choose to sully myself there with you.

There are also other compelling reasons why I will not enter your precious "argument section:" The most important is that a "WAR OF WORDS" presupposes a grasp of the environment of words, (viz, language) which, ostensibly, you don't have. Misspellings, dangling modifiers, split infinitives, and the inept usage of contractions simultaneously bore, depress, and appall me. An altercation of this sort would also require the acquisition of both intelligence and wit, both of which you are sorely lacking. I can think of nothing more tedious than the reading of an interminable flow of obscenities and vulgarities which are comprised of a conglomeration of obscure one syllable four letter words. I find such feeble attempts at communication are indicative of a disease of the mind and spirit whose most notable symptoms are a diarrhea of words accompanied by a total constipation of thought. From this, Mark, please spare me. As I am a *lady* I refuse to engage in battles which tend to compromise my femininity. (Incidentally, weren't you thrown off the group's bulletin board for excessively vile and vulgar language?) The only battles that I have been wont to fight were battles in which were fought from a prone position and I have never scorned my defeat under such circumstances. In a conflagration of this sort, you would be *weaponless!*

In conclusion, Mark, I don't think that I have ever insulted anybody. I have a great love for all of the guys that are loyal to my good ol' 99/4A computer. In fact, I am also rather attracted to them.

Speaking of attractions, I really liked the talk that Jack Topham gave at the last meeting. He is so knowledgeable, intelligent, suave, sophisticated, debonair, and mature. He is the kind of guy that really turns my TI on!

Butch, you did a good job in your first meeting as the new president. Keep up the good work.

In my opinion, I feel the strong need for a technical editor or advisor for the group. There is so much nice hardware coming out for our machine. The last issue of HCM contains a catalog and a sound sheet that deals with music producing hardware that interface with our machine. We therefore need someone to look into the specifications, requirements, disadvantages, advantages, and relative worth of this new equipment. Such work would benefit our whole organization. If any of you foxy guys volunteer for the job, you will have my gratitude and something else to go along with it!

Well, I'm off to pack so I can run down to Champaign to prance with Payton and party with that punky QB. Then its off to New Orleans. Hope I make it back by February 1st. We could get carried away with the victory celebrations and all, but I will do my best to exercise some restraint and get back for the next meeting. See ya after the triumph!

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REMarks: Carole Goldstein

First off this month I want to thank everyone who submitted their articles using the "S" function on the Users' Group BBS. Its there to make it easier for you to submit an article to the newsletter. If you have something to share with the group, take out your TI WRITER. Compose an article and upload it so that your knowledge can be shared with others. If you have a question or comment that you want answered in the newsletter you can also use this function. As I've said so many times in the past, this is your newsletter, you make it what it is. As long as your keep sending in and now posting those articles it will remain what it is today.

Some of those uploaded articles are of a more technical nature. Andy Chernivsky took the time to let us all know how he put together the mini expansion system that he demonstrated at the meeting. The group appreciates the time you have put into this project. And Hank Ellerman, in this issue, shares with us the conversion method for a 12 MS disk controller. Hope you don't get a ticket for speeding, Hank. There are a lot of technical developments happening lately for our machine. Al Stump has volunteered to do a regular column for this publication. If you enjoy tinkering with the inner workings of the console or peripherals, talk to him, leave him E-mail (#330) on the board or write it down. Maybe he can put your project into the works through which we can all gain a better understanding of our machine.

There is one question that I am asked more than any other and that has to o with the identity of Texincia Lubbock. We are delighted to see the return of her RAM BUGS? column. I know that she creates some controversy within the group and that a lot of you like to pick on her, butt Texincia will be free within these pages to speak as she sees fit with minor censorship on my part. Please don't ask me repeatedly to